

must be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications:

(i) *Visual inspection.* Each release mechanism must be visually inspected to confirm—

(A) Compliance with this subpart;

(B) Conformance with the examined plans; and

(C) Ease of operation and maintenance.

(ii) *Materials.* Steel meeting ASTM A 653 (incorporated by reference, see §160.170-5 of this subpart) must meet the coating mass and bend tests requirement specified under ASTM A 653 after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification or by conducting actual tests.

(iii) *Tensile tests.* The release mechanism hook assembly and supporting structure must be tensile tested in a jig built to load the hook assembly in the same way or ways it would be loaded when used with a liferaft or rescue boat. The hook assembly will be approved for a maximum of one-sixth of the highest load applied.

(iv) *Universal joints.* This test is required if the release mechanism employs universal joints to transmit the release power from the control to the hook release. One of each type and size of universal joint must be set up in a jig with the angles of leads set at 0 (zero), 30, and 60 degrees, respectively. A torque of 540 Nm (400 ft lb) must be applied. This torque must be applied with the connecting rod secured beyond the universal and with the lever arm in the horizontal position. There must be no permanent set, or undue stress, as a result of this test.

(v) *Hydraulic controls.* If the release mechanism includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30-35.

(e) *Test waiver.* The Commandant may waive certain tests for a release mechanism identical in construction to smaller and larger release mechanisms that have successfully completed the tests. However, stress calculations in accordance with §160.170-9(b) of this subpart must still be submitted. Tests

associated with release mechanism components that have already been accepted by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005-9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see §160.170-5 of this subpart). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted by paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the release mechanism as built. The plans must include, in triplicate, the instructions for training and maintenance described in §§160.170-19 and 160.170-21 of this subpart, respectively.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005-13.

**§ 160.170-15 Production inspections, tests, quality control, and conformance of release mechanisms.**

(a) Unless the Commandant directs otherwise, an independent laboratory must perform or witness, as appropriate, inspections, tests, and oversight required by this section. Production inspections and tests of release mechanisms must be carried out in accordance with the procedures for independent laboratory inspection in 46 CFR part 159, subpart 159.007 and in this section unless the Commandant

authorizes alternative tests and inspections. The Commandant may prescribe additional production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility.* The manufacturer must—

(1) Institute a quality control procedure to ensure that all production release mechanisms are produced to the same standard, and in the same manner, as the prototype release mechanism approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant, a yearly report that contains the following—

(i) Serial number and date of final assembly of each release mechanism constructed;

(ii) The name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Serial number and model name of the liferaft or rescue boat with which the release hook is to be used, if known;

(4) Ensure that the arrangement and materials entering into the construction of the release mechanism are in accordance with plans approved under § 160.170-13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the release mechanism, work or testing is performed on release mechanisms or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the release mechanisms are being made in accordance with the plans approved under § 160.170-13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007-13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each release mechanism. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each document listed in § 160.170-5 of this subpart;

(2) A copy of the approved plans and documentation;

(3) A current certificate of approval for each approved release mechanism;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved release mechanisms, together with records identifying the serial numbers of the release mechanisms in which such materials were used;

(5) Records of all structural welding and name of operator(s);

(6) Records of welder certificates, training, and qualifications;

(7) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(8) The serial number of each production release gear, along with records of its inspections and tests carried out under this section; and

(9) The original purchaser of each release gear and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness, as appropriate, the inspections and tests under paragraph (e) of this section for each Coast Guard-approved release mechanism to

be installed on a U.S.-flagged vessel. If the manufacturer also produces release mechanisms for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each finished release mechanism must be visually inspected. The manufacturer must develop and maintain a visual inspection checklist designed to ensure that all applicable requirements have been met. Each approved release mechanism constructed with non-corrosion resistant steel must be confirmed to have met the coating mass and bend tests requirement specified under ASTM A 653 (incorporated by reference, see §160.170-5 of this subpart) after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification papers or through conducting actual tests.

(f) Each approved release mechanism must pass each of the tests described in IMO Revised recommendation on testing, part 2, paragraph 6.2 (incorporated by reference, see §160.170-5 of this subpart). However, each approved release mechanism for installation of a single-fall rescue boat must pass each of the tests described in IMO Revised recommendation on testing, part 2, paragraph 5.3.1 and 5.3.4.

#### **§ 160.170-17 Marking and labeling.**

(a) Each hook body of a release mechanism must be marked with a plate or label permanently affixed in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the release mechanism.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Manufacturer's name and model identification;

(2) Name of the independent laboratory that witnessed the prototype or production tests;

(3) Serial number of the release mechanism;

(4) U.S. Coast Guard approval number;

(5) Month and year of manufacture;

(6) Safe working load of the release mechanism;

(7) Number of the test certificate in accordance with IMO Revised recommendation on testing, part 2/6.2.2 (incorporated by reference, see §160.170-5 of this subpart); and

(8) Word "SOLAS."

#### **§ 160.170-19 Operating instructions and information for the ship's training manual.**

(a) In order to comply with SOLAS, each release mechanism must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see §160.170-5 of this subpart) to describe the location and operation of the winch.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

(c) The release mechanism manufacturer must make the instructions and information required by paragraph (a) of this section available—

(1) In English to purchasers of release mechanisms approved by the Coast Guard; and

(2) In the form of an instruction placard providing simple procedures and illustrations for operation of the release mechanism. The placard must be not greater than 36 cm (14 in) by 51 cm (20 in), and must be made of durable material and suitable for display inside a lifeboat and rescue boat, and near launching apparatuses on vessels.

#### **§ 160.170-21 Operation and maintenance instructions.**

(a) Each release mechanism must have operation and maintenance instructions that—

(1) Follows the general format and content specified in IMO MSC.1 Circ. 1205 (incorporated by reference, see §160.170-5 of this subpart); and

(2) Includes a checklist for use in monthly, external inspections of the release mechanism.

(b) The release mechanism manufacturer must make the manual required